

# (12) UK Patent Application (19) GB (11) 2 068 210 A

(21) Application No 8040260

(22) Date of filing  
16 Dec 1980

(30) Priority data

(31) 229/80

(32) 6 Feb 1980

(33) Ireland (IE)

(43) Application published  
12 Aug 1981

(51) INT CL<sup>3</sup> A43B 7/00

(52) Domestic classification  
A3B 3A 7C3

(56) Documents cited

GB 2018678A

GB 1547144

GB 1476828

GB 728075

GB 573918

(58) Field of search  
A3B

(71) Applicant

Dubarry Shoemakers  
Limited

Station Road

Ballinasloe

County Galway

Ireland

(72) Inventor

Philip Boswell

(74) Agents

E N Lewis & Taylor

Chartered Patent Agents

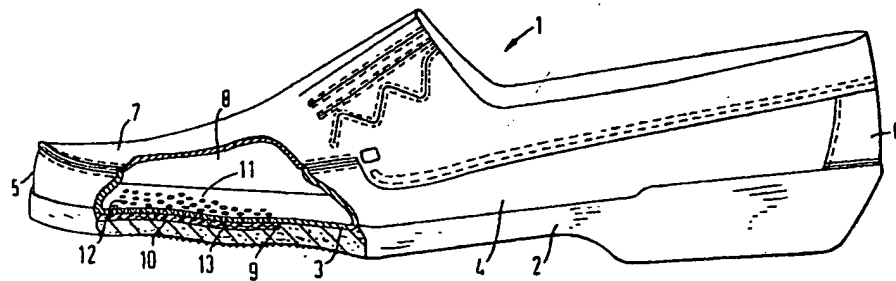
144 New Walk

Leicester LE1 7JA

released into the shoe interior (8).

(54) Footwear incorporating health  
or hygiene arrangement

(57) A shoe for the treatment of foot  
disease or the improvement of foot  
hygiene has a compartment (9)  
formed by a recess (10) in its outer  
sole (2), which recess contains a  
pad (13) impregnated with a foot  
treatment compound. The compart-  
ment and pad are covered by the  
inner sole (3) of the shoe, the inner  
sole being perforated in the region  
(11) overlying the recess to permit  
the foot treatment compound to be



GB 2 068 210 A

2068210

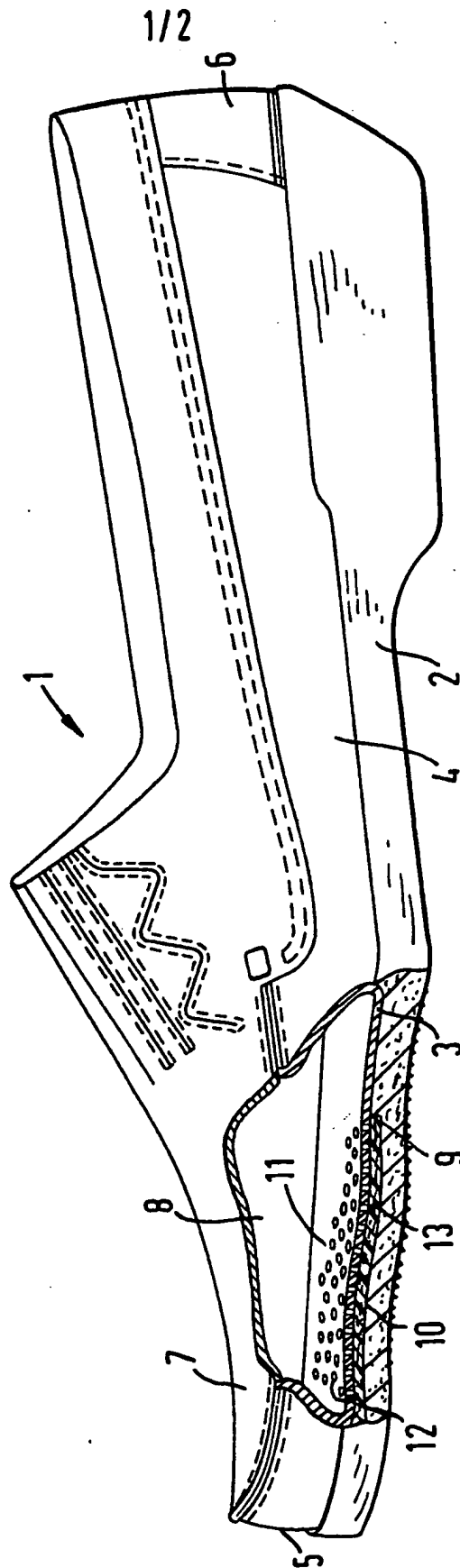
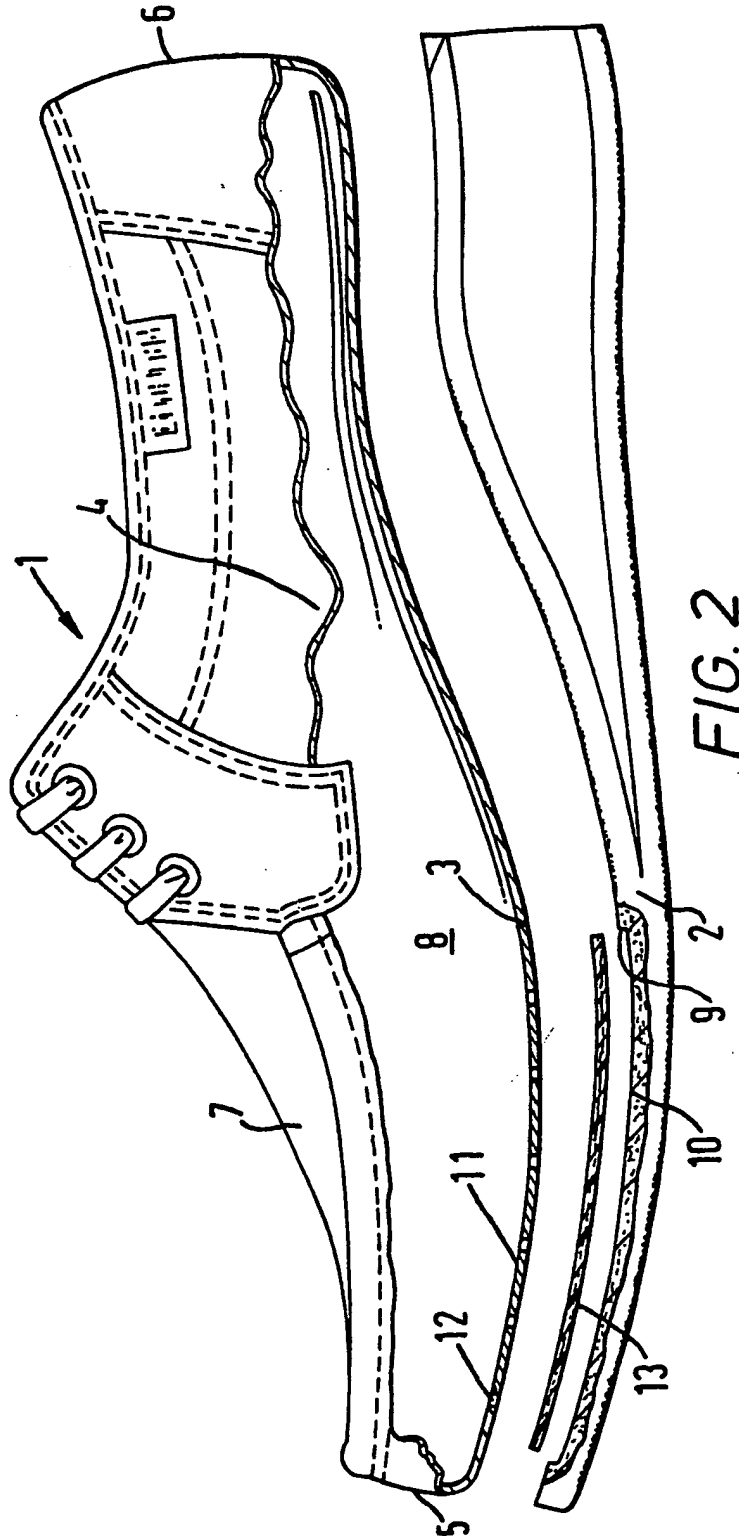


FIG. 1



## SPECIFICATION

### Improvements in and relating to shoes

5 The present invention relates to improvements in and relating to shoes.

The term "shoes" in this Specification includes all forms of footwear including shoes, boots, slippers and other types of similar  
10 footwear.

Foot odour is a problem for many people and various devices have been proposed for alleviating the problem such as the provision of insoles for shoes which are perfumed and  
15 emit a refreshing or fragrant odour to counteract the foot odour. It is also known to provide insoles which have a deodorant incorporated therein. Such constructions of insoles are not particularly efficient in use, since they tend to  
20 be uncomfortable and bulky and additionally after a relatively short period of use they become worn.

The term "foot treatment compound" in this Specification includes all form of deodorants, bacteriostat and pharmaceutical compounds for the treatment of the skin and skin diseases and any other suitable medication which may be used in the treatment of foot diseases or for the improvement of foot hygiene.  
30 ene.

According to the invention there is provided a shoe having a compartment containing a foot treatment compound, the interior of the compartment and the interior of the shoe being connected by a member permeable to the foot treatment compound. Preferably, the compartment is formed between an outer sole and an inner sole of the shoe, and the permeable member is provided by a flat sheet of material having a plurality of holes connecting the compartment and the interior of the shoe.  
35 40

In an embodiment of the invention, the permeable member is formed by a perforated portion of the inner sole, and the compartment is positioned adjacent the toe portion of the sole.  
45

Preferably the foot treatment compound is impregnated in a pad which is fitted snugly in the compartment, the pad being such as to provide slow release of the active ingredients of the compound. Preferably, the pad retains its size and shape as the active ingredients are released from the pad.  
50

An embodiment of the invention will now be described by way of example only, with reference to the accompanying drawings, in which:

*Figure 1* is a partly cut away perspective view of a shoe according to an embodiment of the invention, and  
60

*Figure 2* is a partly cut away exploded side view of the shoe.

Referring to the drawings there is provided a shoe indicated generally by the reference  
65 number 1. The shoe 1 has an outer sole 2

and an inner sole 3. The shoe 1 is of "Moccasin" construction and thus a single sheet of leather is used to form the inner sole 3, side uppers 4 and front and back uppers 5 and 6  
70 respectively. A top upper portion 7 of the shoe 1 is stitched to the side and front uppers 4 and 5 respectively thus defining a shoe interior 8.

A compartment 9 for the retention of a foot treatment compound is formed as a shallow recess 10 between the outer sole 2 and the inner sole 3 by removing a portion from the inner surface of the outer sole 2. A permeable member 11, provided by that portion of the inner sole 3 overlying the recess 10, connects the compartment 9 with the shoe interior 8 by way of holes 12 in the said portion of the inner sole 3. A pad 13 impregnated with a foot treatment compound is located in the  
85 compartment 9. In this embodiment of the invention the pad 13 is formed from a plastics material and sold under the Trade Name "VAPONA". This material provides for the slow release of the active ingredient which is a deodorant. The dimensions of the pad 13 are substantially similar to those of the compartment 9 so as to fit snugly into the compartment and thereby prevent any discomfort to the wearer of the shoe. An advantage in using  
95 a pad manufactured from "VAPONA" is that the pad retains its original shape as the deodorant is being released. As with conventional "Moccasin" construction, the inner sole 3 and the outer sole 2 are bonded together.

In use, the shoe is worn in conventional manner. During use the deodorant is released slowly from the pad 13 and permeates into the interior 8 of the shoe 1 through the holes 12, thereby keeping the wearer's feet fresh.  
100

A non-permeable insole or plug may be provided for placing over the permeable portion of the inner sole to prevent loss of the active ingredient of the compound while the shoe is not being worn. Further, an access slot may be provided to the compartment to facilitate the replacement of pads.  
105 110

Although the invention has been described with reference to a shoe of "Moccasin" construction, it will be appreciated that it can be used in conjunction with any construction of a shoe including flat lasted shoes and moulded plastic shoes.  
115

It will also be appreciated that the compartment containing the foot treatment compound may alternatively be positioned in any suitable position in the side of the shoe to communicate with the interior of the shoe provided it is separated from the shoe interior by a permeable member. It is also envisaged that the inner sole of the shoe may be provided by a material of itself permeable to the active ingredients of the pad, so that actual perforations or holes 12 are not required.  
120 125

A suitable pad impregnated with a foot treatment compound may be used instead of  
130

a pad manufactured from "VAPONA". Further, it is not essential that the foot treatment compound be impregnated in a pad. For example, the foot treatment compound may be placed directly in the compartment provided the permeable member is sufficiently strong to support the foot.

A particularly suitable foot treatment compound is the bacteriostat which is marketed under the Trade Mark "INFRAFRESH". INFRAFRESH provides highly effective protection against a wide range of bacteria, fungi and other micro-organisms and when used in the manufacturers recommended concentrations is perfectly safe for human use and has a long lasting highly substantive effect against gram-positive and gram-negative bacteria, a wide range of fungi and facultative dermatophytes. INFRAFRESH may be applied to a pad, to be housed in the compartment, in the form of a wash, spray or cream or incorporated directly into the compartment provided, in any of a number of suitable conventional ways as such hygiene preparations are normally used.

#### CLAIMS

1. A shoe having a compartment containing a foot treatment compound, the interior of the compartment and the interior of the shoe being connected by a member permeable to the foot treatment compound.

2. A shoe as claimed in Claim 1, wherein the compartment is located in the sole of the shoe.

3. A shoe as claimed in Claim 2, wherein the compartment is located adjacent the toe portion of the shoe.

4. A shoe as claimed in Claim 2 or 3, wherein the shoe has an inner sole and an outer sole, and the compartment is formed between the two soles.

5. A shoe as claimed in Claim 4, wherein the compartment comprises a recess in the inner surface of the outer sole.

6. A shoe as claimed in any preceding claim, wherein the permeable member comprises a perforated sheet of material.

7. A shoe as claimed in Claim 6 in dependency upon Claim 5, wherein the perforated sheet of material is the part of the inner sole overlying the recess.

8. A shoe as claimed in any preceding Claim, wherein the foot treatment compound is impregnated in a pad located in the compartment, the pad providing slow release of the compound into the shoe.

9. A shoe as claimed in Claim 8, wherein the dimensions of the pad are similar to those of the compartment so as to fit snugly therein, and wherein the pad substantially retains these same dimensions as the compound is released.

10. A shoe as claimed in Claim 8 or 9, wherein means are provided for access to the

compartment in order to replace the pad.

11. A shoe having a compartment containing a foot treatment compound, the shoe being constructed substantially as hereinafter described with reference to the accompanying drawings.

Printed for Her Majesty's Stationery Office  
by Burgess & Son (Abingdon) Ltd.—1981.  
Published at The Patent Office, 25 Southampton Buildings,  
London, WC2A 1AY, from which copies may be obtained.